

Docket No. 740819-000715

Serial No. 10/018,369

Page 2

**IN THE CLAIMS:**

Please cancel claims 1-7 in their entirety without prejudice nor disclaimer of the subject matter set forth therein.

Please add new claims 8-14 as follows:

1-7 (Cancelled)

8. (New) A method for manufacturing an optical fiber preform, wherein a first glass rod for a core or a second glass rod for the core and a cladding is inserted into a glass pipe for the cladding, the method for manufacturing an optical fiber preform comprising the steps of:

- a) reducing pressure in the glass pipe,
- b) successively heating the glass pipe and the first glass rod or the second glass rod in a longitudinal direction while reducing the pressure in the glass pipe,
- c) causing the glass pipe to collapse successively in the longitudinal direction due to the heating;
- d) after the step c), successively elongating the preform, in which the glass pipe and the first glass rod or the second glass rod are unified, in the longitudinal direction until the outer diameter thereof becomes a predetermined diameter,

wherein in the step c), after the glass pipe and/or the first glass rod or the second glass rod is/are formed into a tapered shape, the glass pipe is caused to collapse on the first glass rod or the second glass rod.

9. (New) The method for manufacturing an optical fiber preform according to claim 8, wherein the step c) and the step d) are performed so as to satisfy the following equation:

$$0.1 < L1/(L1+L2) < 0.8,$$

where L1 is the length from a base end of a tapered portion of the glass pipe and/or the first glass rod or the second glass rod to a position at which the glass pipe is caused to collapse on the first glass rod or the second glass rod, and L2 is the length from a position at which the glass pipe is caused to collapse on the first glass rod or the second glass rod to a

NVA296890.1

Docket No. 740819-000715

Serial No. 10/018,369

Page 3

position at which the outer diameter of the preform becomes a predetermined diameter.

10. (New) The method for manufacturing an optical fiber preform according to claim 8 or 9, wherein the step c) and the step d) are performed so as to satisfy the following equation:

$$1 < (d0/D0)/(d1/D1) < 2,$$

where D0 is the outer diameter of the glass pipe, d0 is the inner diameter of the glass pipe, D1 is the outer diameter of the glass pipe at the position at which the glass pipe is caused to collapse on the first glass rod or the second glass rod, and d1 is the inner diameter of the glass pipe at the position at which the glass pipe is caused to collapse on the first glass rod or the second glass rod.

11. (New) A method for manufacturing an optical fiber preform, wherein a first glass rod for a core or a second glass rod for the core and a cladding is inserted into a glass pipe for the cladding, the method for manufacturing an optical fiber preform comprising the steps of:

- a) reducing pressure in the glass pipe;
- b) successively feeding the glass pipe and the first glass rod or the second glass rod in a longitudinal direction into a heating furnace while reducing the pressure in the glass pipe;
- c) causing the glass pipe to collapse successively in the longitudinal direction due to successively heating the glass pipe and the first glass rod or the second glass rod in the longitudinal direction in the step b); and

d) after the step c), successively elongating the preform, in which the glass pipe and the first glass rod or the second glass rod are unified, in the longitudinal direction until the outer diameter thereof becomes a predetermined diameter,

wherein a cross section area of the first glass rod or the second glass rod is smaller than a cross section area required for the glass pipe, and

the step of feeding is performed so as to satisfy the following equation:

$$1 < V_R/V_P < 2,$$

where  $V_R$  is a feed rate of the first glass rod or the second glass rod, and  $V_P$  is a feed rate of the glass pipe

NVA296890.1

Docket No. 740819-000715

Serial No. 10/018,369

Page 4

12. (New) The method for manufacturing an optical fiber preform according to claim 11, wherein in the step b), the feed rate of the first glass rod or the second glass rod is adjusted such that a core/cladding ratio of the preform becomes a predetermined value.

13. (New) The method for manufacturing an optical fiber preform according to claim 11 or 12, wherein in the step b), the feed rate of the first glass rod or the second glass rod as adjusted such that a value of the core/cladding ratio of the preform changes in the longitudinal direction as desired.

14. (New) The method for manufacturing an optical fiber preform according to claim 11 or 12, wherein the step c) is performed while the glass pipe and/or the first glass rod or the second glass rod is/are rotated around the axis thereof.

NVA296890.1